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BCH 561.01: RNA Structure and Function

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BCH561– Fall 2021

RNA Structure and Function

Special Topic for the semester is:
RNA packaging

Syllabus

Instructor: Drs. Stephen Lodmell and Jean-Marc Lanchy

Office: CHCB202, Phone: 243-6393, 243-5720

Meeting time: TBD

Meeting place: TBD

This class is designed to give students an opportunity to present both primary research and research materials from the current literature concerning the structure, function, and biochemistry of RNAs as they exert regulatory roles in the cell. These RNAs may be small RNAs or motifs of larger RNAs. Specific topics this semester will include, but are not limited to, the mechanisms used by RNA viruses to package their genomes and the functions of host or viral RNA proteins during infections of mammalian cells.

Learning Outcomes

Upon completion of this class, the student will have:

1. Gained experience in reading current primary biomedical/ biochemical scientific literature pertaining to the special topic described for the semester.
2. Gained a deeper understanding of the details of the state of the current research on the special topic.
3. Gained experience in preparing and presenting scientific data to an audience with a high degree of prior knowledge in the area of study.

The format of the class is as follows: Each hour class period will be devoted to an individual presentation with group discussion of either original research or a review of a paper from the current literature. Each student will present twice during the semester.

When a student is presenting his/her original research, we will discuss results, problems, interpretations, and future directions of this research in an open forum format. Broad student participation in these discussions is essential.

When the presentation is centered on a current research article, the student will provide each member of the class with a copy of the paper he/she will present several days in advance so that all class members will be familiar with the material for the presentation. The presentation is designed to be a critique of the paper, and the presenter should offer his/her view about experimental design, results, and interpretations. Papers may be on any topic, as long as it is related to RNA, retroviruses, or translation.

Grading/assessment:

This is a one-credit course. Grading is on a Credit/ No credit basis. Students will be evaluated on the quality of his/her presentations as well as participation in discussions during class. Students are expected to have prepared for the class by reading the chosen literature article(s) prior to class time to promote informed discussion on the research at hand. Consistent failure to adequately prepare for presentations or discussions will result in a grade of NC.

Accessibility, disabilities, and special accommodations:

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office for Disability Equity (ODE). If you anticipate or experience barriers based on disability, please contact the ODE at: (406) 243-2243, ode@umontana.edu, or visit www.umt.edu/disability for more information. Retroactive accommodation requests will not be honored, so please, do not delay. As your instructor, I will work with you and the ODE to implement an effective accommodation, and you are welcome to contact me privately if you wish. Any questions please contact me.

Schedule of presentations: (TBD)